3.3.4 BIOLOGICAL RESOURCES

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
Would the project:				
(a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
(b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
(c) Have a substantial adverse effect on federally protected wetlands as defined by section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☒	☐
(d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
(e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒

Issues (and Supporting Information Sources):	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
(f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?	☐	☐	☐	☒

Environmental Setting

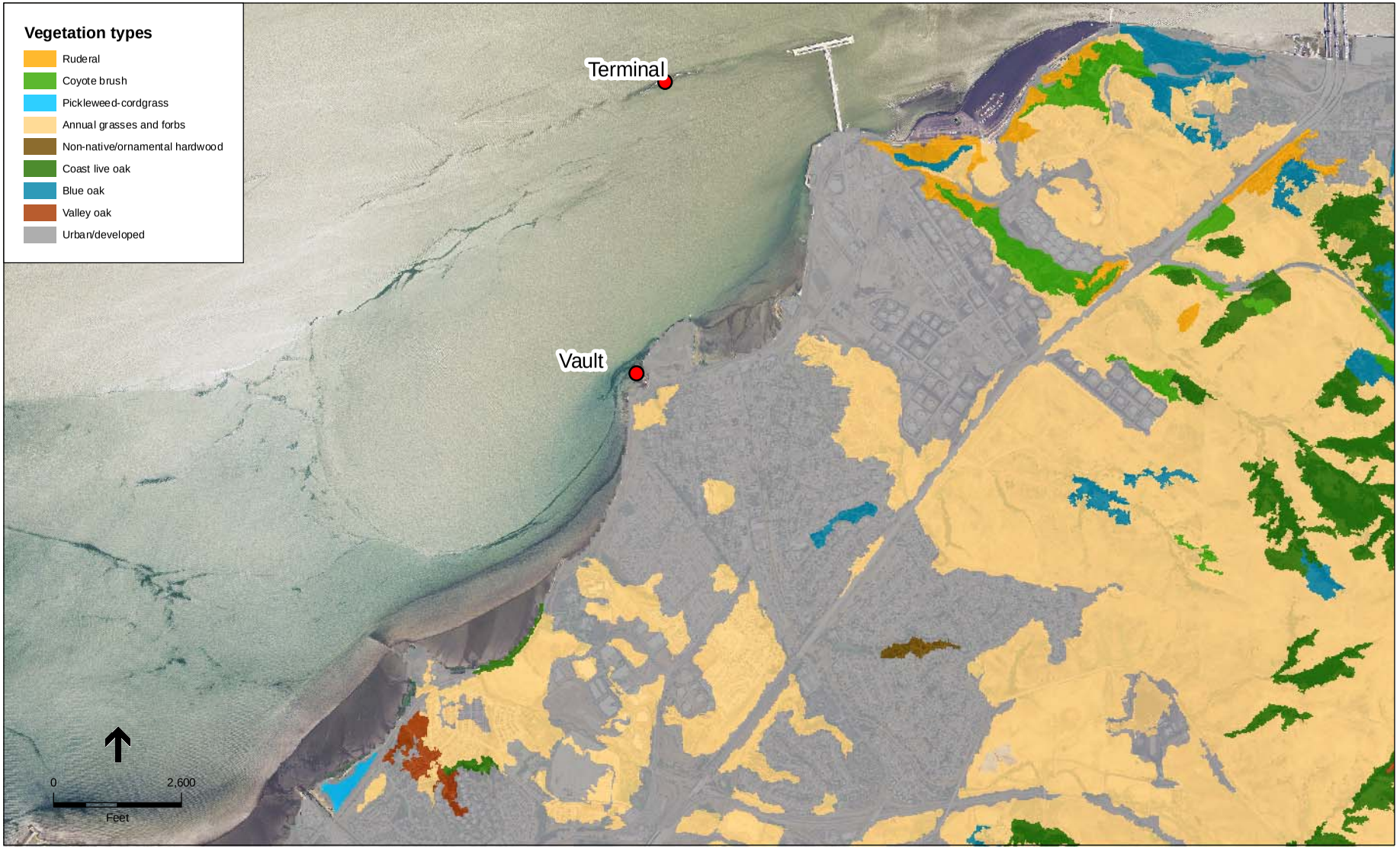
The Coscol Marine Terminal Deconstruction and Pipeline Abandonment Project traverses both aquatic and terrestrial habitats in the San Francisco Bay Estuary. The Marine Oil Terminal (MOT) is located on the southeastern side of San Pablo Bay along a deep-water shipping channel adjacent to Davis Point, immediately west of the Carquinez Strait. Buried pipelines that originally connected the MOT with an onshore refinery extend from the MOT underground to a concrete vault located on the shoreline. There is a narrow intertidal area consisting of quarried rock and concrete debris. From there, the pipelines extend upland where they cross under a Union Pacific Railroad right-of-way and terminate in the Victoria Crescent Open Space.

Habitats

The predominant habitat at the Project site is aquatic, including open water (pelagic), soft sediment (benthic), hard bottom (benthic), and rocky intertidal. Terrestrial habitat in the proposed Project area is limited to two types, ruderal and barren/developed. Figure 3.3.4-1 shows the vegetation types occurring in the vicinity of the proposed Project.

San Pablo Bay-Open Water (Pelagic) Habitat

The open waters of San Pablo Bay vary in temperature, salinity, dissolved oxygen, and turbidity within the water column depending on water depth, location, and season. The water column can be classified as shallow-water/shoals and deepwater/channels (NOAA 2007). The water column provides habitat for plants (phytoplankton), invertebrates (zooplankton), fishes, birds, and marine mammals.



Coscol Marine Terminal MND . 208518

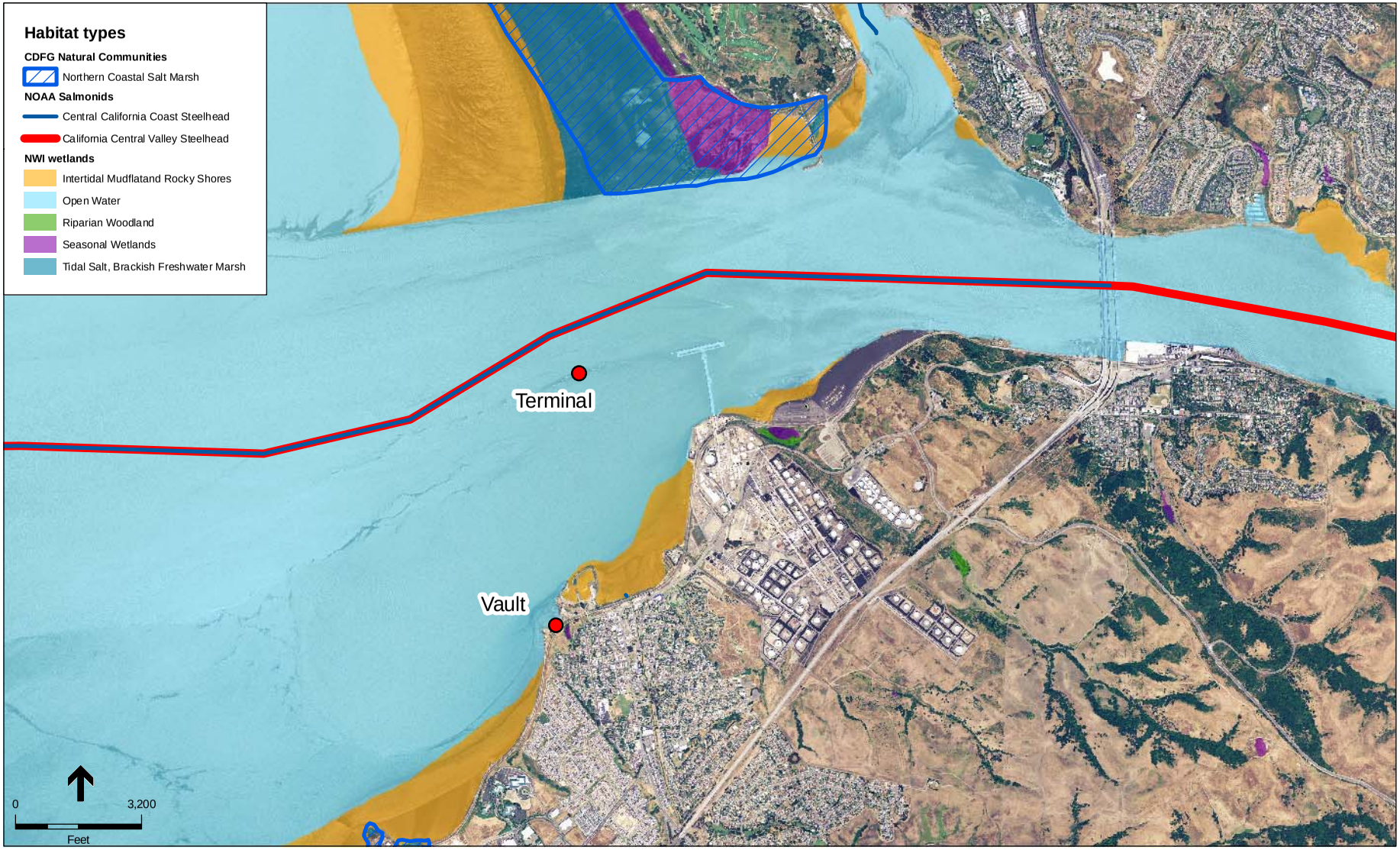
SOURCE: CDF, 2005

Figure 3.3.4-1
Vegetation

The fish community inhabiting San Pablo Bay and the western portions of Suisun Bay, including the Project site, is dominated by northern anchovy (*Engraulis mordax*), Pacific herring (*Clupea pallasii*), American shad (*Alosa sapidissima*), jack smelt (*Atherinopsis californiensis*), longfin smelt (*Spirinchus thaleichthys*), and striped bass (*Morone saxatilis*). Seasonally, Chinook salmon (*Onchorhynchus tshawytscha*) becomes a dominant species and the delta smelt (*Hypomesus transpacificus*) can also be present (Appendix D-1) (CDFG Interagency Ecological Program 2000-2007). Chinook salmon and delta smelt are both Federal and State listed special-status fish species, with winter-run Chinook salmon listed as endangered and spring-run Chinook salmon listed as threatened. Delta smelt were recently changed from threatened to endangered by the State of California on March 5, 2009 (SF Chronicle 2009). The U.S. Fish and Wildlife Service is in the process of listing Delta smelt as endangered under the ESA. Long fin smelt have also been recently listed as threatened by the State of California (SF Chronicle 2009). Northern anchovy are also protected under the Coastal Pelagic Fishes Management Plan (Olberding 2008).

The Project area is located within the established migration corridor for adult steelhead trout and smolts (*Onchorhynchus mykiss irideus*), a State and federally protected species. Both the Central Valley Steelhead ESU and the Central California Coast Steelhead ESU, which both use San Francisco Bay-Delta waters, are listed by both the State of California and the Federal government as threatened. San Pablo Bay is designated as critical habitat for both the Central California Coast and California Central Valley Evolutionarily Significant Units (ESU) (Figure 3.3.4-2). Both the main shipping channel and adjacent shallows are used by steelhead trout for migration and foraging. Although CDFG data (Appendix D-1) (CDFG Interagency Ecological Program 2000-2007) do not indicate that steelhead trout can be expected to be present in the Project area in any significant numbers, individuals can be expected to be present (Olberding 2008).

Marine mammals frequently observed in San Pablo Bay include harbor seals (*Phoca vitulina*), California sealions (*Zalophus californianus*), and the harbor porpoise (*Phocoena phocoena*). California gray whales (*Eschrichtius robustus*) occasionally swim into San Francisco and San Pablo Bays on their annual migrations between Mexico and Alaska (NOAA 2007). All of these species are protected under the Federal Marine Mammal Protection Act (MMPA).



SOURCE: CNDDB, 2008; NOAA, 2005; NWI, 2003

Figure 3.3.4-2
Critical Habitat and Special-Status Communities

The dominant marine birds inhabiting or utilizing San Pablo Bay and the Project area include cormorants (*Phalacrocoras* spp.), the pigeon guillemot (*Cepphus columba*), the herring gull (*Larus argentatus*) and the mew gull (*L. canus*) (NOAA 2007). Osprey (*Pandion haliaetus*) are also frequently observed in the Project area. During a site visit to the MOT in early December 2008 (ESA and AMS), an osprey nest was observed in one of the transfer hose assemblies.

San Pablo Bay - Soft Sediment (Benthic) Habitat

The soft gravel, sand and silt sediments of San Pablo Bay, and at the Coscol MOT, fall into two sub-categories: shallow-subtidal and deepwater channels. The bivalves *Corbula amuensis, Mya arenaria, Venerupis japonica, Macoma Petaluma*, and *Muscuilista senshousia* are common and typically dominate the biomass of the region (NOAA 2007). The large motile invertebrates common in San Pablo Bay include Dungeness crab (*Cancer magister*), blackspotted shrimp (*Crangon nigromaculata*), a gastropod snail (*Ilyanassa obsoleta*), the American spider crab (*Pyromaia tuberculata)* and the nudibranch (*Sakuraeolis enoisimensis)* (NOAA 2007*)*.

More than 30 fish taxa have been observed inhabiting or utilizing the benthic habitat of San Pablo Bay between 2000 and 2007. This fish community is dominated by the Bay goby (*Lepidogobius Lepidus*), English sole (*Parophrys vetulus*), striped bass (*Morone saxatilis*), plainfin midshipmen (*Porichthys notatus*), Pacific staghorn sculpin (*Leptococottus armatus*), longfin smelt (*Spirinchus thaleichthys*), yellowfin goby (*Acanthogobius flavimanus*), cheekspot goby (*Ilypnus gilberti*), white croaker (*Genyonomus lineatus*), speckled sanddab (*Citharichthys stigmaeus*), shiner surfperch (*Cymatogaster aggregata*), California halibut (*Paralichthys californicus*), starry flounder (*Platichthys stellatus*), Pacific herring (*Clupea pallasii*), American shad (*Alosa sapidissima*), and diamond turbot (*Pleuronichthys guttulatus*) (CDFG Interagency Ecological Program 2000-2007). Several of the groundfish listed above, such as English sole and starry flounder, as well as other occasional inhabitants such as sand sole (*Psettichthys melanostictus*) and big skate (*Raja binoculata*), are covered by the Pacific Groundfish Management Plan which identifies San Francisco Estuary as Essential Fish Habitat (EFH) for these species (Appendix D-1) (Olberding 2008). The North American green sturgeon (*Acipenser medirostris ayres*) is known to inhabit the waters and bottom (benthic) habitat of San Pablo Bay. The San Pablo Bay and the Project area are considered green sturgeon habitat. Although California Department of Fish and Game (CDFG) data (Appendix D-1) (CDFG Interagency Ecological Program 2000-2007) do not

indicate that green sturgeon are present in the general Project area in any significant numbers, they are known to be present (Olberding 2008). The National Marine Fisheries Service is in the process of determining and designating critical habitat for the green sturgeon, which may include San Pablo Bay (McGowan and Josselyn 2008).

San Pablo Bay - Hard Bottom (Benthic) Habitat

The concrete and wood pilings of the MOT provide hard substrate for many sessile marine organisms. These include barnacles, bryozoans, hydrozoans, the bay mussel, occasional sponges, and green algae. In recent years, the native or Olympia oyster, *Ostrea conchaphila*, has been making a comeback in San Francisco Bay and its distribution includes San Pablo Bay.

San Pablo Bay-Rocky Intertidal Habitat

The shore side pipeline reaches land at a vault that is protected by quarried rock and concrete debris. This shoreline riprap provides some hard bottom intertidal habitat that supports similar taxa to those present on the pilings of the MOT. In addition, several species of crabs, isopods, snails, and amphipods may also be present.

Ruderal

Terrestrial vegetation in the Victoria Crescent Open Space consists of ruderal species and some escaped ornamental plants. Ruderal species are non-native, hardy, and able to grow in highly disturbed areas. Ruderal species found on-site are bristly ox-tongue (*Picris echioides*), wild oats (*Avena* sp.), and wild radish (*Raphanus sativus*). The area in the immediate vicinity of the Project does not provide good habitat for any special-status species beyond foraging or for transient individuals. There is a high probability that this area supports feral cats (*Felis catus*) and dogs (*Canis familiaris*), as well as common bird species such as rock doves (*Columba livia*), starlings (*Sturnus vulgaris*), and sea gulls (*Larus* sp.).

Barren/Developed

The other terrestrial habitat within the Project area is considered barren/developed. This includes the concrete riprap used to stabilize the shore, as well as the railroad, track ballast, and railroad ties. These habitats support very minimal biological diversity.

Special-Status Species

A number of species with the potential to occur in the Project vicinity are protected pursuant to Federal and/or State endangered species laws, or have been designated Species of Special Concern by the California Department of Fish and Game (CDFG). In addition, section 15380(b) of the *California Environmental Quality Act (CEQA) Guidelines* provides a definition of rare, endangered, or threatened species that are not included in any listing.[1] Species recognized under these terms are collectively referred to as "special-status species."

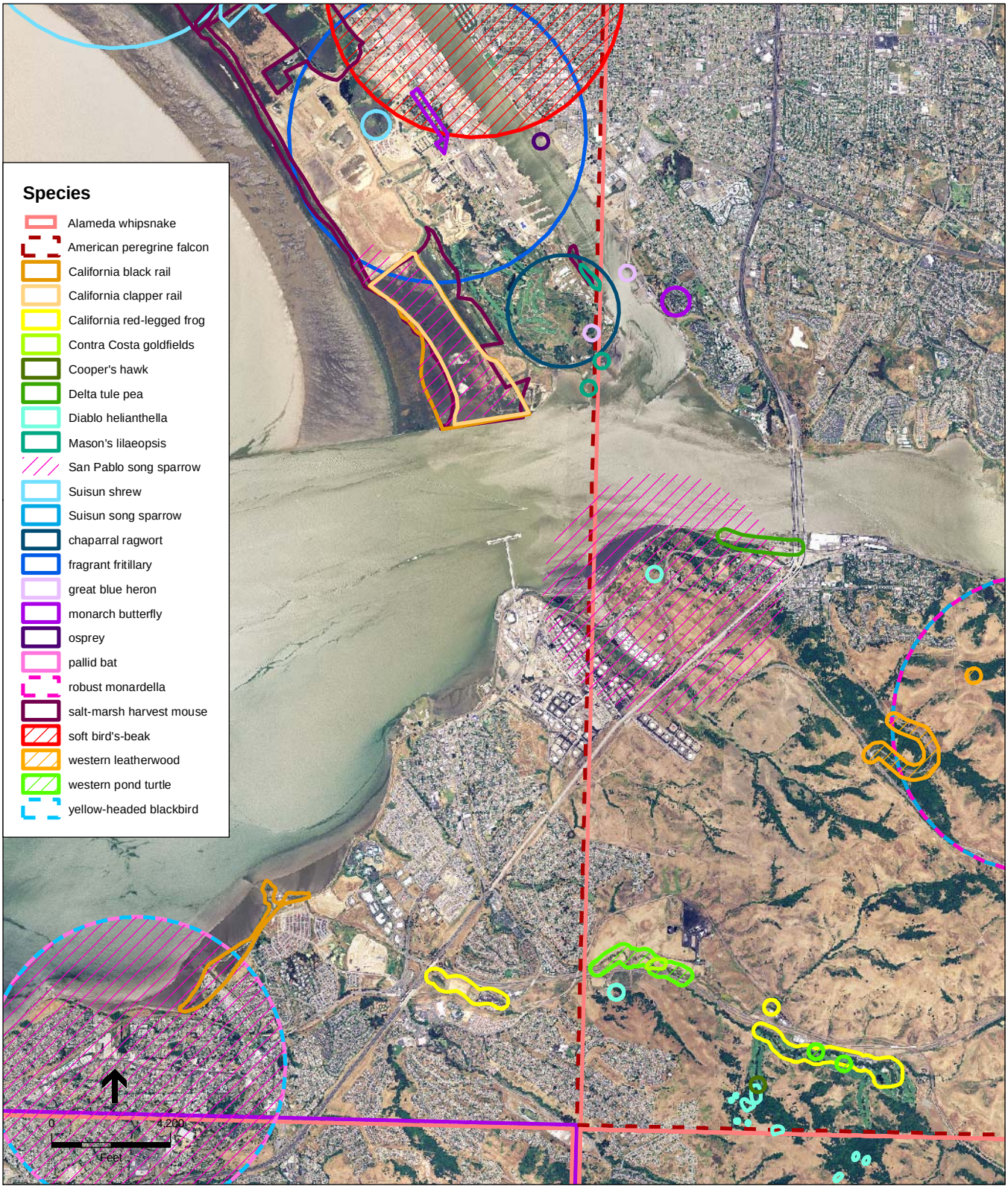
Appendix D-2 provides a comprehensive list of the special-status species that have been documented, or have potential to occur, in suitable habitat within the U.S. Geological Survey (USGS) quadrangles around the general study area. This list was derived using the California Natural Diversity Database (CDFG 2008), California Native Plant Society Electronic Inventory (CNPS) (CNPS 2008), USFWS (USFWS 2008), as well as additional information from CDFG and the National Oceanic and Atmospheric Association. Figure 3.3.4-3 shows records of special-status species within the Project vicinity (CDFG 2008).

Based on ESA's review of the biological literature of the region, previous environmental analyses and surveys in the proposed Project vicinity, and an evaluation of the habitat conditions of the terminal and pipeline, many of these species were eliminated from further evaluation because: (1) the proposed Project site or the immediate area does not provide suitable habitat, or (2) the known range for a particular species is outside of the proposed Project site and/or the immediate area.

The special-status species list presented in Appendix D-2 includes species that occur in the general habitat types that are within or in the vicinity of the proposed Project site. Species determined to have low potential to occur within the proposed Project site are listed in Appendix D-2 with the reasoning behind the determination, and are not expected to occur within the proposed Project site.

Of the special-status plants and animals presented in Appendix D-2, nine species were determined to have a moderate to high potential to occur within the proposed Project site. These special-status species include Delta smelt (*Acipenser medirostris*), longfin smelt

[1] For example, vascular plants listed as rare or endangered or as List 1 or 2 by the CNPS are considered to meet section 15380(b).



Coscol Marine Terminal MND . 208518

SOURCE: CNDDB, 2008

Figure 3.3.4-3
Special-Status Plants and Animals

(*Spirinchus thaleichthys*), California brown pelican (*Pelecanus occidentalis californicus*), green sturgeon (*Acipenser medirostris*), double-crested cormorant (*Phalacrocorax auritus*), California least tern (*Sterna antillarum*), osprey (*Pandion haliaetus*), pacific harbor seal (*Phoca vitulina*), and the California sea lion (*Zalophus californicus californicus*).

Other special-status species that can be potentially present in the Project area at levels below moderate to high but have the potential to be affected by the Project include Chinook salmon (*Oncorhynchus tshawytscha*) and steelhead trout (*Onchorynchus mykiss*).

Impact Analysis and Mitigation

Impact Discussion

(a) Due to the limited nature of the terrestrial component of the proposed Project, there is little potential for impacts on special-status terrestrial species. This is also true for the potential contractor's shore bases (see Section 2.3.5, Contractor's Shore Base), which are all located in existing industrial settings. However, there are potential impacts to special-status or managed aquatic species.

Impact BIO-1: Potential impacts to fish species due to deconstruction activities.

Deconstruction activities, e.g., vessel movements and mooring, mooring anchor placement, barge grounding, piling removal, jetting/dredging to expose piles below the seafloor surface, and underwater noise generated by general deconstruction activities may result in physical displacement, habitat disturbance, and short-term loss of foraging area for special-status fish such as Delta smelt, longfin smelt, green sturgeon, Chinook salmon, steelhead trout, Pacific herring, and Fishery Management Plan managed groundfish. (Potentially Significant, Class II)

Many of the operational activities associated with deconstruction of the marine terminal will result in individual fish swimming away from or avoiding the immediate Project area. Any noise generated by many of these activities, which is capable of transmission through the water column (underwater noise), is not expected to be of sufficient intensity or frequency to cause physical impairment or death in fish and is therefore considered less than significant. Noise generated by deconstruction activities is expected to result in the same types of avoidance behavior as result from other Project disturbances, such as vessel movements, jetting of sediments, piling removal, etc. These physical

disturbances will collectively result in the physical displacement of fish, including special status fish species, away from the Project Area as well as the potential temporary loss of foraging habitat, which is considered a significant impact. Therefore, the physical displacement, habitat disturbance, or loss of foraging habitat for special-status fish would be considered a potentially significant impact.

Mitigation Measures for Impact BIO-1:

MM BIO-1a. Avoidance Measure. Minimize vessel traffic and movements to reduce potential physical displacement of fish.

MM BIO-1b. Minimize Nearshore Habitat Disturbance. The shallow draft barge used to deconstruct the shore side pipeline vault shall be limited to one round-trip to conduct planned deconstruction activities at the pipeline vault. Personnel shall be transported daily to the barge by means of a shallow draft boat. Barge and support vessels shall transit through the shallows at a no-wake producing speed to minimize disturbance to bottom sediments. Anchoring shall be minimized.

MM BIO-1c. Minimize Nearshore and Offshore Habitat Disturbance. The Anchoring Plan specified in **APM-16** shall require that the use of mooring anchors by deconstruction vessels and barges shall be minimized. The Anchoring Plan (see **APM-16**) shall further specify that if mooring anchors must be used, then a secondary support workboat shall be used to deploy and retrieve mooring anchors and that mooring anchors shall not be dragged along the seafloor.

MM BIO-1d. Decommissioning Personnel Training. Personnel involved in deconstruction activities shall be trained in the importance of the marine environment to special-status fish, birds, and marine mammals and the environmental protection measures put in place to prevent impacts to these species and Essential Fish Habitat.

Rationale for Mitigation

These mitigation measures would reduce or eliminate physical disturbance and disturbance to important habitat for sensitive fish species inhabiting the waters surrounding the Project site. Crew training will improve compliance with environmental

mitigation measures and protections established for the Project. Impacts would be reduced to less than significant.

Impact BIO-2: Potential impacts of deconstruction to marine mammals.

Deconstruction activities may result in direct impacts to marine mammals such as California sea lions and Pacific harbor seals. (Potentially Significant, Class II)

The MOT is known to occasionally provide a resting area for California sea lions and harbor seals. They have been observed basking on the boat ramp. Although this is not an area used regularly for haul outs, there is the possibility that a few individuals may be present at the time of deconstruction.

Mitigation Measure for Impact BIO-2:

MM BIO-2a. Implementation of Marine Mammal Contingency Plan. Coscol has prepared a Marine Mammal Contingency Plan, which shall be implemented in its entirety. This plan, as discussed in **APM-11**, is consistent with section 109 (h) of the Marine Mammal Protection Act for dealing with nuisance animals and animals that need to be relocated from a location for their own protection and welfare. This plan will be reviewed by NOAA-NMFS and CSLC personnel prior to implementation.

MM BIO-2b. Prioritize Removal of Potential Haul Out Locations. Parts of the MOT that have the potential to be used by marine mammals as a resting haul out (pilings and structural support components, boat landing) are to be removed as early in the deconstruction schedule as possible. This will be done in order to prevent the continued use of these structures by marine mammals during deconstruction.

Rationale for Mitigation

By implementing the Marine Mammal Contingency Plan, as approved by NOAA-NMFS and CSLC, direct impacts to marine mammals will be reduced and/or avoided. In addition, removal of the parts of the MOT used by the marine mammals for resting will eliminate the need to repeatedly relocate the mammals during deconstruction activities. Impacts to marine mammals will be reduced to less than significant.

Impact BIO-3: Potential impacts of lighting on fish species.

Use of bright nighttime lighting may affect the normal movement and increase predation of special-status fish such as Delta smelt, longfin smelt, green sturgeon, Chinook salmon, steelhead trout, Pacific herring, and Fishery Management Plan managed groundfish. (Potentially Significant, Class II)

Use of bright lights to support nighttime deconstruction activities can affect normal behavioral patterns of migratory birds and special-status fish species, as well as increase the natural predation on these species. **APM-7** specifies that deconstruction activities will be limited to daylight hours only; this applicant proposed measure would reduce this potential impact to less than significant.

Impact BIO-4: Potential impacts of toxic materials to fish species.

Release of toxic materials to the marine environment can result in deleterious physical impact to special-status fish such as Delta smelt, longfin smelt, green sturgeon, Chinook salmon, steelhead trout, Pacific herring, and Fishery Management Plan managed groundfish, marine birds, and mammals as well as the important habitat supporting them. (Potentially Significant, Class II)

The presence of hydrocarbon based fluids and solids in or on equipment remaining at the Project site, as well as on deconstruction work vessels and equipment, poses the potential for the accidental release of these materials into Bay waters where they could have a significant impact to Bay ecosystems and special-status species of fish, birds and marine mammals, either directly or indirectly through impacts to important habitat for these species. Operational actions proposed by Coscol to minimize the potential for hazardous materials to be released to the Bay include no cross-vessel fueling (**APM-1**), use of secondary containment and drip pans (**APM-2**), double containment of all fuel and lubricant storage, (**APM-2**) conduction of hazardous material assessments and removal of all hazardous materials prior to deconstruction activities including lead based paints and asbestos (**APM-5**), removal of all remaining hydrocarbons (**APM-13**), and use of BMPs and the construction of temporary structures under the terminal to contain falling debris and materials (**APM-6**). These measures will provide initial protection but the additional mitigation measures, below, will further prevent hazardous materials from impacting Bay waters and ecosystems.

Mitigation Measures for Impact BIO-4:

MM BIO-4a. Boom Deployment. A floating boom and skirt suitable for sea and weather conditions in San Pablo Bay shall be deployed around the MOT and deconstruction vessels. The boom shall be inspected at least daily and any retained floatable debris and sheen producing liquids shall be removed and properly disposed.

MM BIO-4b. On-site Absorbent Boom and Pads. A sufficient supply of sorbent booms and pads shall be available at the MOT and aboard all decommissioning work vessels and barges to recover any spilled hydrocarbon, hydrocarbon containing fluids, or other hazardous liquids. Used pads and booms shall be properly handled and disposed of.

MM BIO-4c. Sealing All Tank, Vessels, Hose, and Pipe Openings. Prior to removal of any equipment, hoses, or pipe from MOT to decommissioning barges or ships for transport to the shore base, they shall be visually inspected for the presence of hydrocarbons. If present, the openings or penetrations shall be sealed to prevent the accidental release of any hazardous materials still residing in the equipment, hoses, or pipe; or sorbent material shall be used to remove the hydrocarbon fluids/residue prior to transfer to deconstruction barges.

MM BIO-4d. Use of Seep Tent. During cutting and capping activities of all pipelines below the seafloor at the marine terminal, a seep tent shall be deployed above the divers to contain any residual hydrocarbons that may be trapped in the excavated pipeline segment and which could be released to Bay waters.

MM BIO-4e. Removal of Hydrocarbons from Pipelines. Prior to removal of either the riser section or the shore-side landfall segment of each of the five pipelines transiting between the previous MOT, each pipeline shall be carefully inspected for the presence of any hydrocarbon material that may have risen to the two high-points of each pipeline. Any hydrocarbons that have pooled at the two ends of each pipeline shall be recovered and removed prior to the removal of that pipeline segment. Any recovered hydrocarbon material shall be properly stored and disposed of.

MM BIO-4f. Use of Biodegradable, Non-Toxic Hydraulic Fluid in Decommissioning Equipment. To avoid the most significant source of potential toxic hydrocarbon releases to Bay waters from deconstruction activities, non-toxic biodegradable hydraulic fluid shall be used in all decommissioning equipment.

Rationale for Mitigation

Deployment of a floating boom around the MOT and deconstruction vessels will increase assurance that if any toxic materials are accidentally released to Bay waters, their dispersion and migration away from the Project site is minimized. This will include any creosote piling fragments.

Distribution and use of sorbent pads and booms will reduce the potential for hydrocarbon containing fluids from accidentally being released to Bay waters.

The best management practice of sealing all tank, vessels, hose, and pipe openings prior to removal of any equipment will ensure that any retained hazardous fluids in deconstructed equipment will not accidentally be released to Bay waters.

The terminal end of each pipeline rises above Bay waters and represents a high point in the pipeline where any residual hydrocarbons in each pipeline can migrate to and accumulate. The use of a seep tent will capture any hydrocarbons that may be released.

Although the pipelines were flushed to <15 parts per million (ppm) of total recoverable petroleum hydrocarbons (TRPH) in 1999 and again in 2003, remaining hydrocarbons may migrate to high spots at either end of each pipeline. Removal of this material prior to removal of the pipeline segment from the water will prevent hydrocarbon-containing material from being released to Bay waters.

Preliminary abandonment efforts at the Project site may have left assorted hazardous materials that could have an impact on Bay waters and ecosystems, as well as special status fish, birds, and marine mammals if improperly removed, handled, or disposed of.

Use of biodegradable and non-toxic hydraulic fluid in all deconstruction equipment will reduce the impacts of an accidental release to special-status fish, birds and marine mammals utilizing Bay habitats. With the preceding mitigation measures in place, biological impacts due to the release of toxic materials would be reduced to less than significant.

Impact BIO-5: Potential impacts of debris on nearby habitat.

Loss of marine oil terminal equipment and deconstruction debris into the Bay may negatively impact special-status species and their habitats. (Potentially Significant, Class II)

Accidental loss of deconstruction equipment, pipe, concrete decking and piles into Bay waters could result in the impairment of important seafloor habitat and the release of toxic materials into Bay waters. Use of tag lines, removal of equipment over deck and boat surfaces, and construction of temporary structures under the terminal to contain falling debris will prevent most material from accidentally falling into the Bay or facilitate its immediate recovery. In the event that deconstruction equipment and materials are accidentally dropped into the Bay, post deconstruction bottom surveys and debris removal will need to be implemented. As outlined in **APM-16**, a Seafloor Debris Removal Plan will be prepared by the Applicant and approved by the CSLC. The implementation of the following mitigation measures would reduce potentially significant impacts to less than significant.

Mitigation Measure for Impact BIO-5:

MM BIO-5a. Deconstruction Debris Recovery. The onsite contractor's supervisor and mitigation monitor shall record any deconstruction equipment, tools, pipe, pilings, other materials, or MOT debris that are accidentally dropped into the Bay. Its description and location shall be included in the record. As proposed in **APM-16**, a Seafloor Debris Removal Plan will be prepared by the Applicant and approved by the CSLC. This plan will outline at a minimum:

1) debris field boundaries associated with deconstruction activities;

2) items requiring immediate cessation of deconstruction activities and immediate initiation of search and recovery efforts and procedures for implementing those recovery efforts;

3) how lost debris that is to be removed post-deconstruction is to be identified, who will be conducting search and recovery operations, and the survey methods to be employed to locate lost equipment and materials;

4) criteria that will be used to:

   a) determine whether recovery efforts are appropriate for the object being recovered and do not result in potential environmental impairment greater than if the debris was allowed to remain in place; and

   b) when sufficient effort has been expended to recover a lost object(s) with no success and continued efforts to recover the seafloor debris have diminishing potential for success and/or result in environmental impairment greater than leaving the debris in place.

5) person(s) responsible for implementing the Plan and making the determination on the type of recovery required;

6) how debris is to be disposed of or recycled; and

7) metrics for determining when recovery efforts will be considered complete.

MM BIO-5b. Seafloor Debris Removal Plan Preparation. This Plan shall be prepared and approved by the CSLC prior to initiation of on-site deconstruction activities.

MM BIO-5c. Seafloor Debris Removal Plan Implementation: Implementation of the approved Seafloor Debris Removal Plan must commence within 30-days following completion of the on-site MOT deconstruction activities and be monitored by the environmental mitigation monitor.

MM BIO-5d. Seafloor Debris Removal Plan Report: Following completion of all post deconstruction recovery efforts for seafloor debris, a report will be prepared and submitted to the CSLC detailing at a minimum, 1) recovery activities during decommissioning and post-decommissioning, 2) listings of all lost and recovered debris, and 3) final disposition of recovered debris, and 4) discussion of what debris could not be recovered and why.

Rationale for Mitigation

In the event that any deconstruction debris equipment or materials are accidentally lost to the Bay, then its removal will reduce or eliminate potential impacts to important Bay habitat. The Seafloor Debris Removal Plan must include sufficient environmental

protection measures to ensure that debris recovery efforts do not result in environmental impacts to Bay habitats and biota that are potentially greater than allowing the debris to remain on the seafloor. The timely preparation and implementation of the plan will ensure effective recovery of lost Project debris and minimize potential environmental impacts posed by the debris to Bay habitat and biota. Impacts would be reduced to less than significant.

Impact BIO-6: Potential impacts of deconstruction activities on special-status birds.

Deconstruction activities may result in the disturbance of individuals or nests of special-status bird species. If nests are present during deconstruction, they would be destroyed. This would result in not only significant impacts, but also violation of regulations including the Migratory Bird Treaty Act, the state and/or federal Endangered Species Act, and other CDFG restrictions. (Potentially Significant, Class II).

Since deconstruction will occur during bird breeding and nesting season between May 15 and October 31 (scheduled to avoid migrating salmonids), some birds may have already established nests. The marine terminal may provide some roosting habitat for the California brown pelican (*Pelecanus occidentalis californicus*), double-crested cormorant (*Phalcrocorax auritus*), and California least tern (*Sternula antillarum browni*). Osprey (*Pandion haliaetus*) are also known to forage in the area. In the Biological Assessment (GANDA 2005), bank swallows (*Hirundo rustica*) and cliff swallows (*Petrochelidon pyrrhonota*) were observed around the platform and may be nesting in the MOT. In addition, a western gull nest (*Larus occidentalis*) was identified on the structure as well as rock dove eggs (*Columba livea*). Destruction of a migratory bird's nest would result in violation of the Migratory Bird Treaty Act. Western gulls, cliff and bank swallows, osprey, least tern, brown pelican, and double-crested cormorant are all migratory birds. The least tern and brown pelican are further protected by federal and California Endangered Species Acts. Individual osprey are protected as well as their nests under CDFG code section 3503.5. The implementation of the following mitigation measures would reduce potentially significant impacts to less than significant.

Mitigation Measure for Impact BIO-6:

MM BIO-6a. Bird Plan. In consultation with the CDFG and the USFWS, Coscol shall prepare a Bird Plan detailing actions that would be taken to prevent bird

nesting (deterrence measures), monitoring, appropriate responses to the presence of special-status birds and/or their nests, and an evaluation of the demolition project's sequence and potential for disturbance to nesting birds.

MM BIO-6b. Prevent Bird Nesting. Under the supervision of a qualified biologist, deterrence measures (described in the Bird Plan, **MM BIO-6a**) shall be employed.

MM BIO-6c. Prioritized Removal of Nesting Structures. In order to reduce the probability of birds nesting on the terminal structure, elements that are the most likely to support nests (such as the loading arms) shall be removed as soon as possible in the deconstruction process.

MM BIO-6d. Preconstruction Surveys. Prior to deconstruction, as described in the Bird Plan (**MM BIO-6a**), a survey for nests shall be completed by a biologist to ensure that no nesting has taken place.

MM BIO-6e. With Nests Present. In the event that a nest is found on the terminal, all deconstruction activities on the terminal shall be stopped to prevent disturbance or destruction of the nest. Coscol shall consult with the appropriate resource agency (such as CDFG, or the USFWS) as to the appropriate action.

Rationale for Mitigation

In order to prevent destruction of these nests, and consequent violation of the Migratory Bird Treaty Act, a Bird Plan would be developed in consultation with CDFG and USFWS. With the implementation of the above mitigation measure and the Bird Plan, impacts to special-status bird species and their nests would be reduced to less-than-significant.

(b) Several specific native vegetative communities within California (as distinct from the organisms they support) have been identified as rare and/or sensitive. These natural communities are of special significance because the present rate of loss indicates that acreage reductions or habitat degradation could threaten the viability of dependent plant and wildlife species. The California Natural Diversity Database identifies Northern coastal salt marsh habitat approximately 1 mile southwest of the Project area (Figure 3.3.4-2). These salt marshes occur above intertidal sand and mud flats and below upland terrestrial communities that are not subject to tidal action. They consist of perennial graminoids and forbs with

algal mats on moist soils and at the bases of plants. These marshes provide food, cover, nesting and roosting habitat for a range of species including endemics such as the clapper rail, black rail, and salt marsh harvest mouse. The Project is unlikely to have a significant adverse effect on any riparian habitat or other sensitive natural community. Best management practices would be employed to minimize potential indirect effects through changes in water quality. (Class III)

(c) All parts of the watershed system are under the jurisdiction of the Clean Water Act or "waters of the State" regulated by the Regional Water Quality Control Board or the California Department of Fish and Game. Any temporary impacts from deconstructing the platform would be negligible in comparison to the continued use or abandonment in place (see Section 3.3.8, Hydrology and Water Quality). There would be temporary alterations to the shoreline but there are no wetlands within the Project area above Mean High Water. The apron around the vault would be removed to access the pipelines, which would be filled with grout. Rip rap similar to that currently used along the shoreline will be used to restore the vault area. Because piping and concrete will be removed from the vault area, the volume of restored area will be somewhat smaller than the existing vault area and will be blended into the existing rip rap along the adjacent portions of the shoreline to approximate pre-existing conditions (Class III)

(d) The Project would interfere with the movement of special status fish.

Impact BIO-7: Potential impacts of deconstruction to migratory fish.

Deconstruction activities, e.g., vessel movements and mooring, mooring anchor placement, barge grounding, piling removal, and jetting/dredging to expose piles below the seafloor surface, may result in physical disturbance and migration movement impacts to special-status fish such as Delta smelt, longfin smelt, green sturgeon, Chinook salmon, steelhead trout, Pacific herring, and Fishery Management Plan managed groundfish. (Potentially Significant, Class II)

Implementation of **MM BIO-1a, b, c and d**, as well as **APM-7** would reduce disturbances to special status species and minimize alterations in their migratory behaviors and paths. With these mitigation measures, potential impacts would be reduced to less than significant.

(e) The proposed Project is consistent with the policies and objectives of the San Francisco Bay Plan (SF BCDC 2008) regarding biological resources. (No Impact)

(f) No Habitat Conservation Plan or Natural Community Conservation Plan currently applies to the Project site. (No Impact)